MASTER'S THESIS REVIEW

Author:	Bc. Tomáš Flek
Thesis Title:	**Supporting hospital visit preparation for specific user groups**
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Thesis Opponent:	Ing. Tomáš Černý Ph.D.

Assignment

The aim of the thesis was development of a tool to support hospital visit preparation. The analytical part should include user research of hospital visitors (with accent on visually impaired and seniors), information handover regarding indoor navigation, SoA analysis of comparable solution and suitable development tools. User Centered Design method [1] should have been used for the development.

Technical Manuscript

The thesis is written in English, it has standard structure and contains all necessary information. It consists from seven chapters.

The introduction contains clear discussion of the assignment, formulates the motivation as well as objectives of the thesis. Follows an analysis that consists of summary of the related work, description of related navigation system (this thesis contributes to this system), analysis of development tools with accent on web accessibly. User research is described in a separate chapter 3, it is based on a qualitative study with six participants, but also on available quantitative data (e.g. Figure 3.1). The analytical part of the thesis is well described while the related research methods has been used correctly.

Following chapter 4 focuses on design part of the thesis. Since the thesis focuses on specific user groups, the accent here is also on interaction methods. The interaction concept as well as covered use-cases are described here. Follows description of several prototypes (basic mockup, Lo-Fi prototype, Hi-Fi prototype, final design), including reflexion of issues discovered by usability evaluation of individual prototypes. The design is complex and addresses needs of very specific user groups, including accessibility requirements.

Chapter implementation starts with description of used technologies. Follows a valuable section that describes accessibility improvements implemented mosty to address findings of user testing. Furthermore, this chapter contains description of REST server-side API.

Individual prototypes described in the thesis have been evaluated primarily from the usability and accessibility perspective. Even initial design concepts have been evaluated using heuristic evaluation. Low Fidelity prototype has been evaluated using usability testing with 3 seniors and 3 visually impaired users. While high-fidelity prototype has been tested with 7 seniors and 7 visually impaired users respectively. Individual evaluations contain clear formulation of discovered issues, including priorities and recommendations how to address these issues. Furthermore, accessibility of the final prototype has been additionally verified using corresponding online tool. Basic unit testing of the application backend has been also reported. I would like to highlight quality of accessibility and usability evaluation described in this thesis.

Last part that concludes the thesis and states the possible future work is rather short but contains the vital information about thesis achievements.

Implementation

The implementation is based on web technologies, namely, HTML, CSS3, JavaScript, Bootstrap framework. The final prototype has been reimplemented to JSP and use of REST-API to access server backend based on Jersey framework.

Questions

1. How much time have you spent on field study, user study and usability evaluation in the framework of your thesis?

Conclusion

Mr. Flek showed that he is capable of working independently on complex assignments. The presented thesis comprises complex analysis, design as well as implementation. Furthermore, prototypes described in the thesis have been evaluated with two very specific user groups.

I assess the thesis with mark A (excellent).

In Prague, June 6th 2016

Ing. Miroslav Macík

References

[1] DIS, ISO. (2009). 9241-210: 2010. Ergonomics of human system interaction-Part 210: Human-centred design for interactive systems.